



advanced air mobility

drones



urban air mobility

air taxis

STEM LEARNING:
Advanced Air Mobility:
What is AAM?
Educator Guide

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OVERVIEW

This activity provides students with information on what Advanced Air Mobility (AAM) is. Made for a middle school audience (grades 6 through 8), the student guide includes informational text and comprehension questions.

Standards

Common Core State Standards, English Language Arts

CCSS.ELA-LITERACY.RST.6-8.4

- Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context (relevant to grades 6–8 texts and topics).

Optional Teaching Strategies

- Use literacy tactics to help students make sense of the text, such as numbering paragraphs, circling unknown words, and underlining main ideas.
- Have students read the comprehension questions first, before reading the text, so that they have a purpose for reading.
- Have students work with a partner or in a small group when completing the activities.
- If students have the option to read this article digitally, use a screen reader or text-to-speech application to assist English language learners and/or special education students.

TEACHER DIRECTIONS

1. This activity is designed for individual completion; however, it can also be completed in small groups. The entire activity should take 30–45 minutes, but this can vary depending on the students.
2. Before class, make copies of the student guide for each student/group.
3. Prior to working on this activity, introduce students to AAM. This can be done with a video or by leading a whole class discussion about what it is and how it would affect your students.
4. Before having students begin, point out that there is a glossary at the end of the document that provides definitions for the bolded words throughout the guide.
5. All or some of the reading comprehension questions can be assigned.

ANSWERS FOR READING COMPREHENSION QUESTIONS

1. (from paragraph 4) The aircraft within the AAM system are relatively small, fly at low altitudes, and often operate near buildings and other objects that would interfere with radar and satellite technology.
2. (from paragraphs 5–8) AAM offers a broad range of benefits for both urban and rural areas including package delivery, passenger transport, and emergency response. UAVs are also used for aerial photography, agriculture, mapping, and inspection of buildings, power lines, and more.
3. (There are many possible answers to this question.) The article discusses the use of geofences around airports. Some other areas they could help protect include military bases, areas like sports stadiums with large crowds, and critical infrastructure locations such as government buildings.
4. (from paragraph 4) Many of the aircraft within the AAM system are unmanned. As a result, DAA is very important. Frequently, there will be situations where no human pilot is available to intervene to avoid a collision.
5. Some types of weather that would make it difficult for a small UAV to fly are rain, snow, extreme temperatures, and any hazardous weather situation (tornado, hurricane, etc.).
6. (from paragraph 16) Within a city, landing and taking off from a street would interfere with other modes of transportation. As a result, specified locations, called vertiports, allow AAM aircraft to land at different points throughout a city.
7. (from paragraph 16) Vertiports are flight terminals for UAVs, similar to airports for larger planes. They are located at different points in and near a city. They are currently not commonly found because AAM is still a developing system. As more UAVs are operating in and around cities, more vertiports will be added.

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